Appendix D

Supplemental Information on the Low Level Burial Grounds, Environmental Restoration Disposal Facility, Borrow Pits, Trench Liners, and Disposal Facility Barriers

This appendix contains information on the Low Level Burial Grounds (LLBGs), the Environmental Restoration Disposal Facility (ERDF), the borrow pits used for the closure covers of the LLBGs, liners used in disposal facilities, and barriers that will be placed over the disposal facilities after they are filled.

D.1 Low Level Burial Grounds

The LLBGs are eight separate waste disposal areas located in the 200 Areas. They are regulated under the Atomic Energy Act (AEA) of 1954 (42 USC 2011) and the trenches that contain MLLW are also regulated under Resource Conservation and Recovery Act (RCRA) (42 USC 6901; 40 CFR 261.8), and applicable state laws and regulations (WAC 173-303). The following sections summarize specific information concerning the LLBGs.

D.1.1 200 East Area Burial Grounds

Burial Ground 218-E-12B. Burial Ground 218-E-12B (Figure D.1) is located in the northeast corner of the 200 East Area. It covers approximately 70.1 ha (173.2 ac) and began receiving waste in 1962. Burial Ground 218-E-12B has three trenches containing retrievably stored transuranic (TRU) waste, but contains primarily low-level waste (LLW) generated by facilities in the 200 East Area. Trench 94, a portion of 12B, is reserved for the disposal of U.S. Navy defueled reactor compartments composed of various types of steel and lead shielding. Trench 94 is regulated under the Toxic Substances Control Act (TSCA) (15 USC 2601; 40 CFR 717, 761, and 792) and RCRA because it contains polychlorinated byphenyls (PCBs), and is permitted for the disposal of mixed low-level waste (MLLW).

Burial Ground 218-E-10. Burial Ground 218-E-10 (Figure D.2) is located in the northwest corner of the 200 East Area and is used primarily for LLW disposal, although it also contains MLLW. It began receiving waste in 1960 and covers approximately 36.1 ha (89.2 ac). Waste in this burial ground came from the 200 East and 100 N Areas facilities, and was primarily received in large concrete boxes.

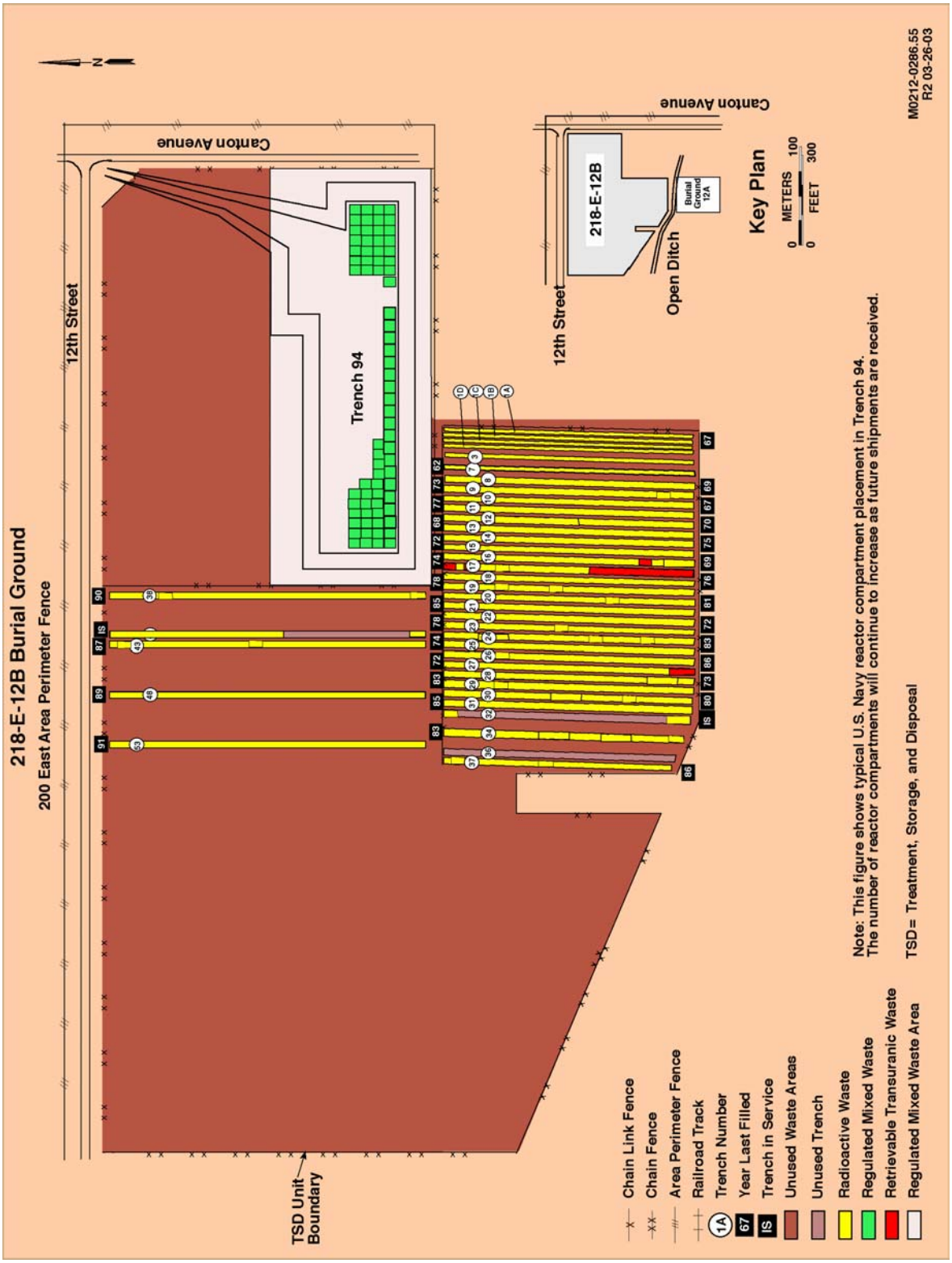

Figure D.1. 218-E-12B Burial Ground

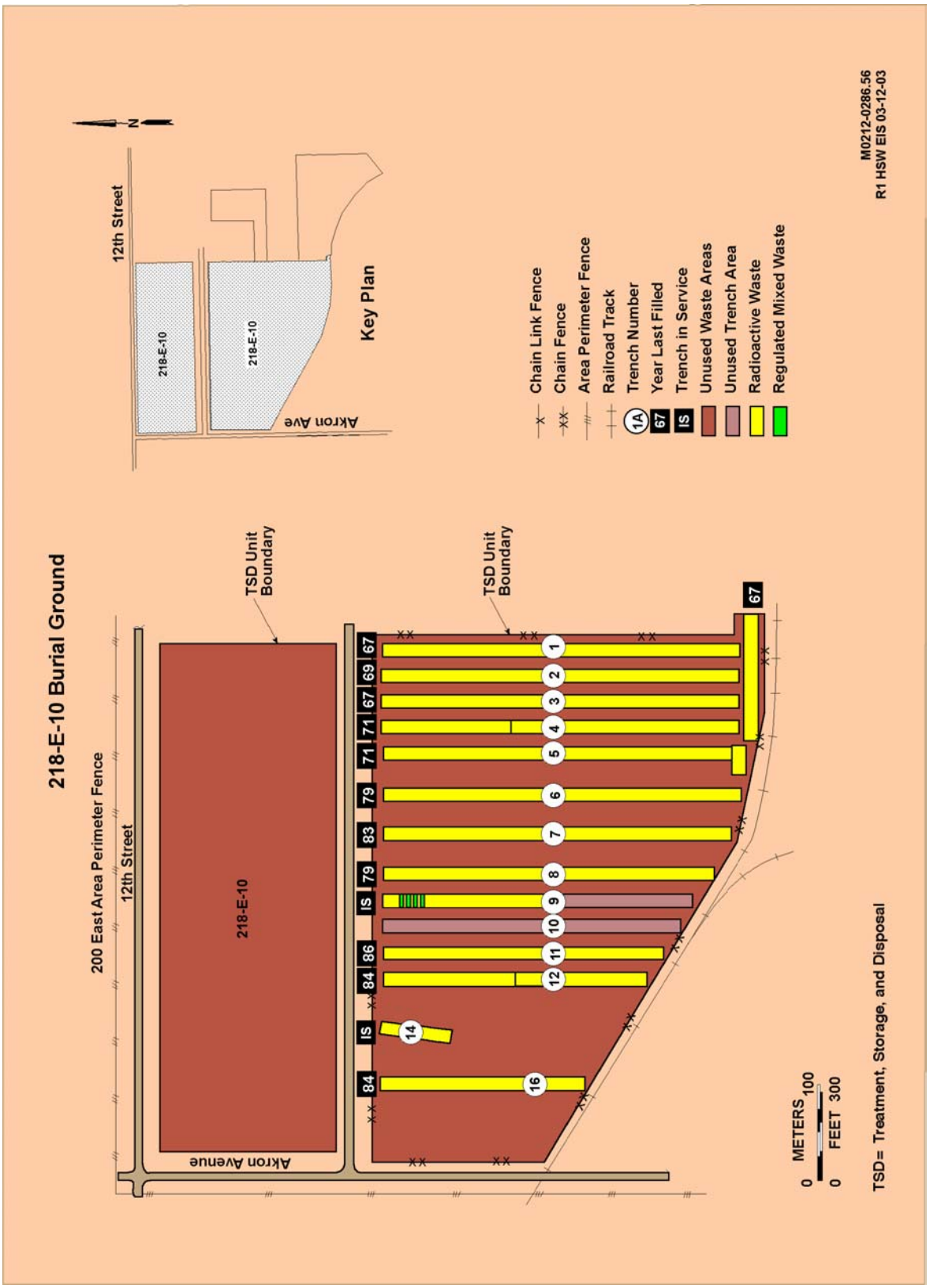

Figure D.2. 218-E-10 Burial Ground

D.1.2 200 West Area Burial Grounds

Burial Ground 218-W-3A. Burial Ground 218-W-3A (Figure D.3) began receiving waste in 1970. Located in the north-central section of 200 West Area, it covers approximately 20.4 ha (50.3 ac). Primarily, it receives LLW, but also contains MLLW, and retrievably stored TRU waste.

Burial Ground 218-W-3AE. Burial Ground 218-W-3AE (Figure D.4) covers approximately 20 ha (49.4 ac) and began receiving waste in 1981. It contains primarily LLW, although MLLW is present. This burial ground includes Trenches 05 and 10 that are wide-bottom stacking trenches, and Trench 26 that was dug with a wide bottom to dispose of LLW railroad cars and large tanks.

Burial Ground 218-W-4B. Burial Ground 218-W-4B (Figure D.5) began receiving wastes in 1968, and is located in the central portion of the 200 West Area. It consists of 14 trenches (one containing 12 caissons, of which 4 caissons contain TRU waste) and covers 3.5 ha (8.6 ac). The trenches in this burial ground contain unsegregated TRU waste and contact-handled (CH) TRU waste stored on an asphalt pad mostly in 55-gal drums. Trench 7 contains one of the earlier designs for retrievably stored TRU waste—the V trench. The concrete V trench stores waste containers on a 45-degree angle and is covered with a metal roof and soil. The TRU waste in Trench 11 contains either remote-handled (RH) or CH wastes. Trench 14 contains caissons that are underground storage structures for the disposal of 3.8-L (1-gal) to 18.9-L (5-gal) cans of RH waste.

Five caissons were planned for TRU waste and from 1970 to 1988 retrievably stored TRU waste was placed in four of them. The caissons have been isolated. One caisson has never been used. Seven caissons containing LLW were filled from 1968 to 1979 and are also found in this burial ground. No additional waste placement is planned for any of these caissons. All the trenches in this burial ground are covered with earth.

Burial Ground 218-W-4C. Burial Ground 218-W-4C (Figure D.6) started receiving waste in 1978. It covers approximately 20 ha (49.4 ac) and mainly receives LLW, although some MLLW and retrievably stored TRU wastes are also present. The most northern trench (Trench NC) contains core barrels from naval bases. Trench 1 contains mostly retrievably stored TRU waste, including drums generated from mining the 216-Z-9 Crib. Trench 4 also contains retrievably stored TRU waste. Trench 7 contains retrievably stored TRU boxes and drums of Test Reactor and Isotope Production General Atomics (TRIGA) fuel waste. Additional retrievably stored TRU wastes in boxes and drums are located in Trenches 19, 20, 24, and 29.

Burial Ground 218-W-5. The 218-W-5 Burial Ground (Figure D.7) began receiving wastes in 1986. It covers approximately 37.2 ha (91.9 ac) (excluding the expansion area) and accepts MLLW and LLW. The 218-W-5 Burial Ground currently contains two permitted MLLW trenches.

Burial Ground 218-W-6. Burial Ground 218-W-6 (Figure D.8) covers approximately 16 ha (39.5 ac). To date, it has not received any waste.

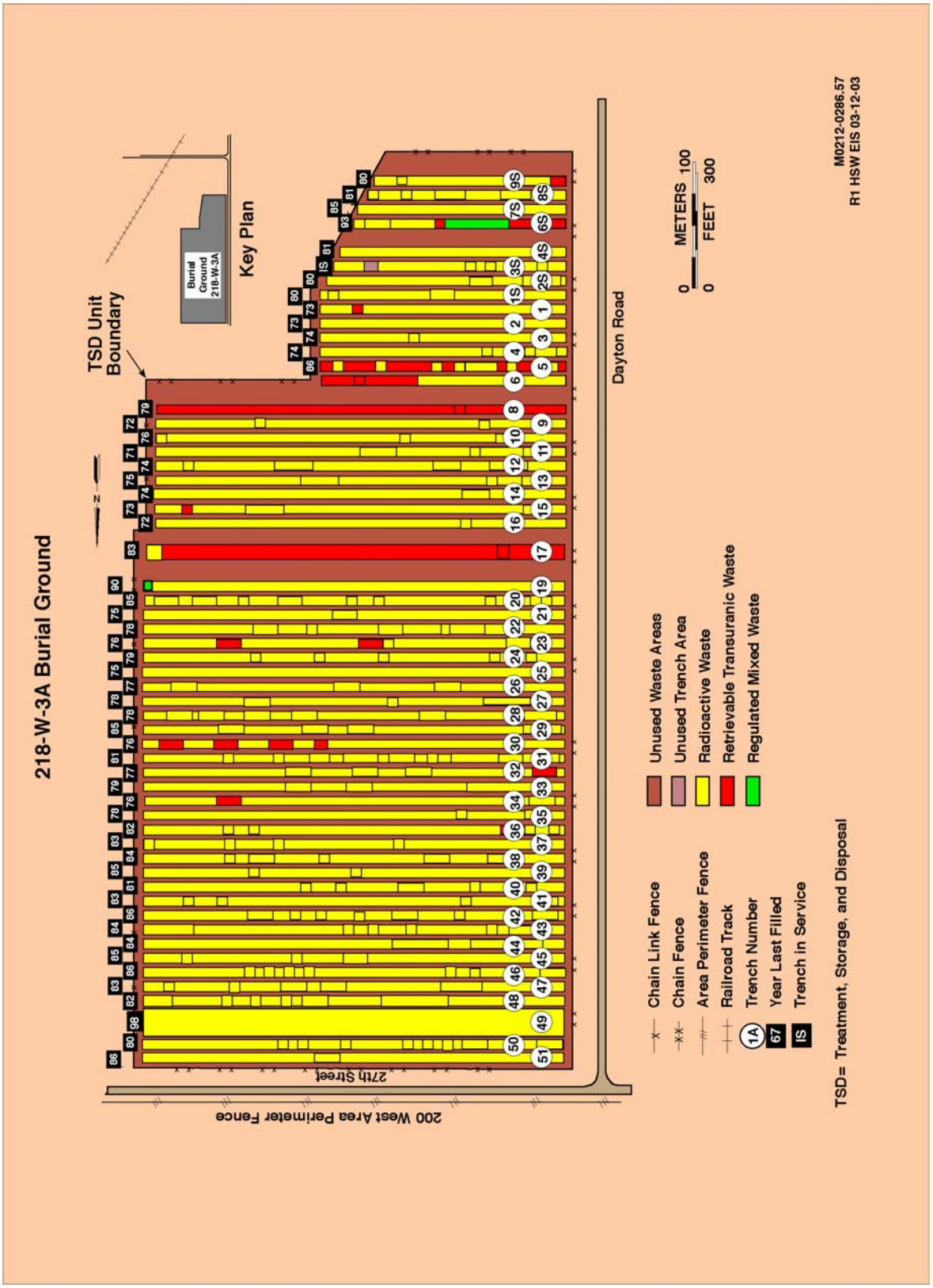

Figure D.3. 218-W-3A Burial Ground

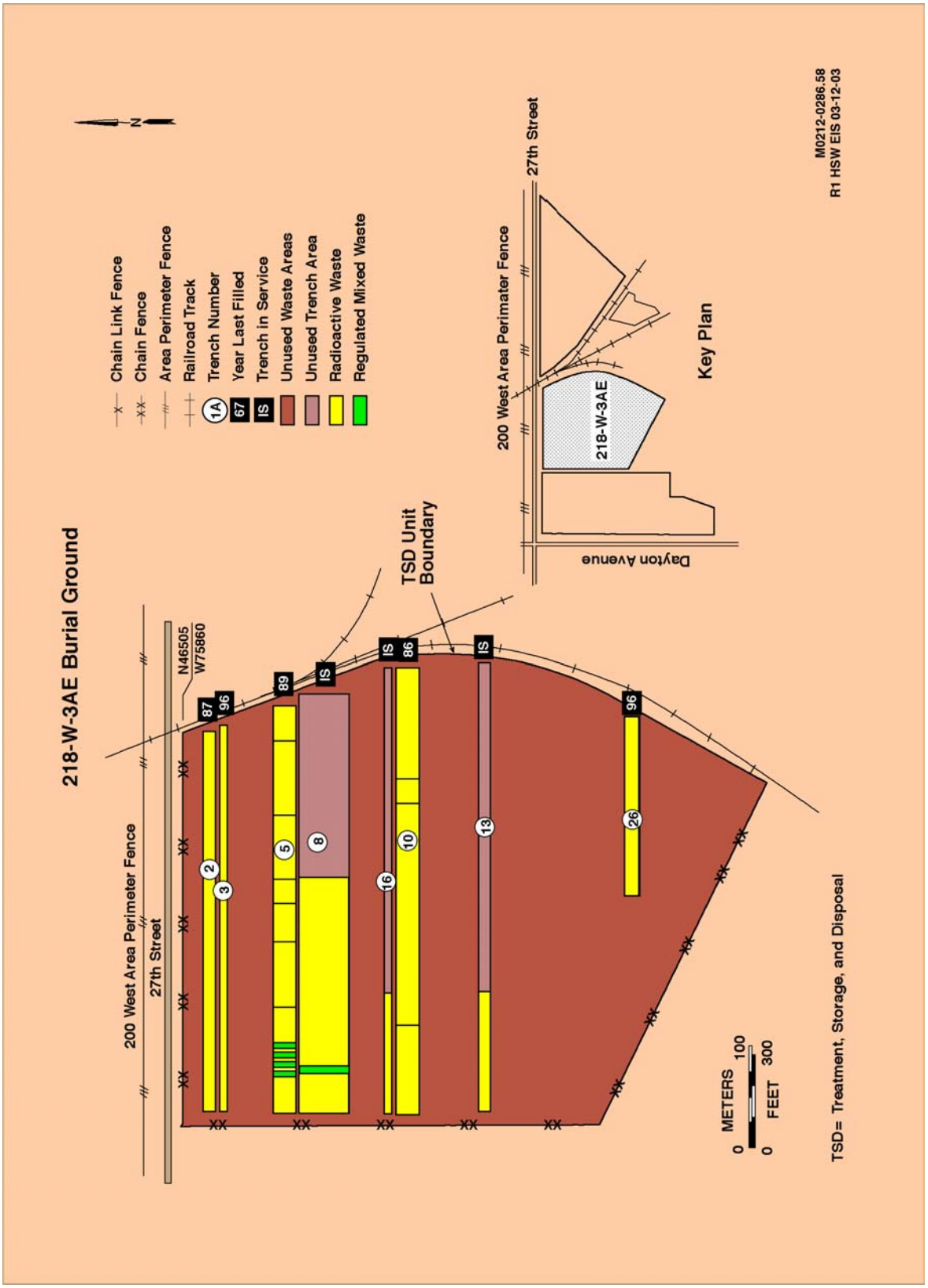

Figure D.4. 218-W-3AE Burial Ground

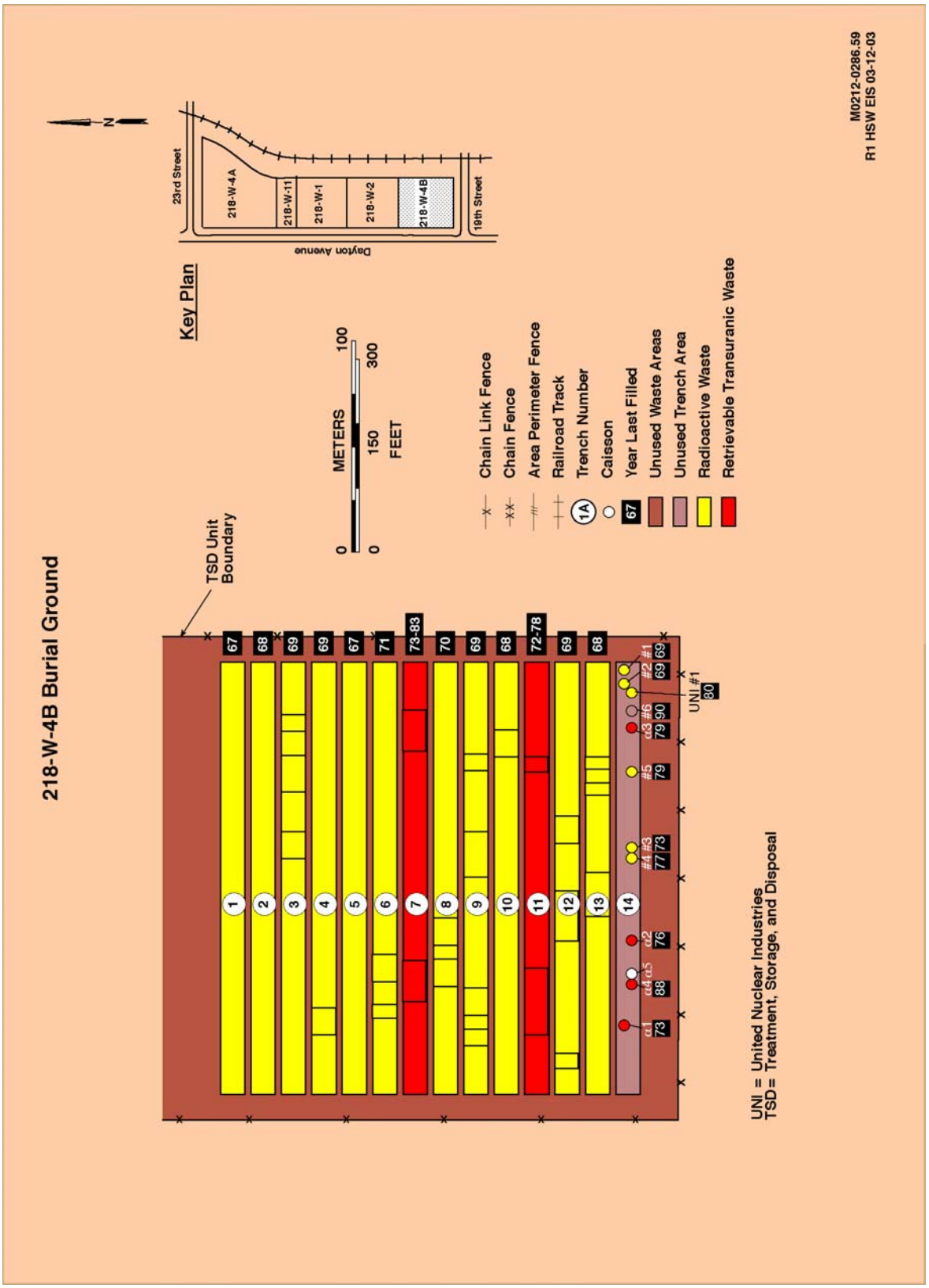

Figure D.5. 218-W-4B Burial Ground

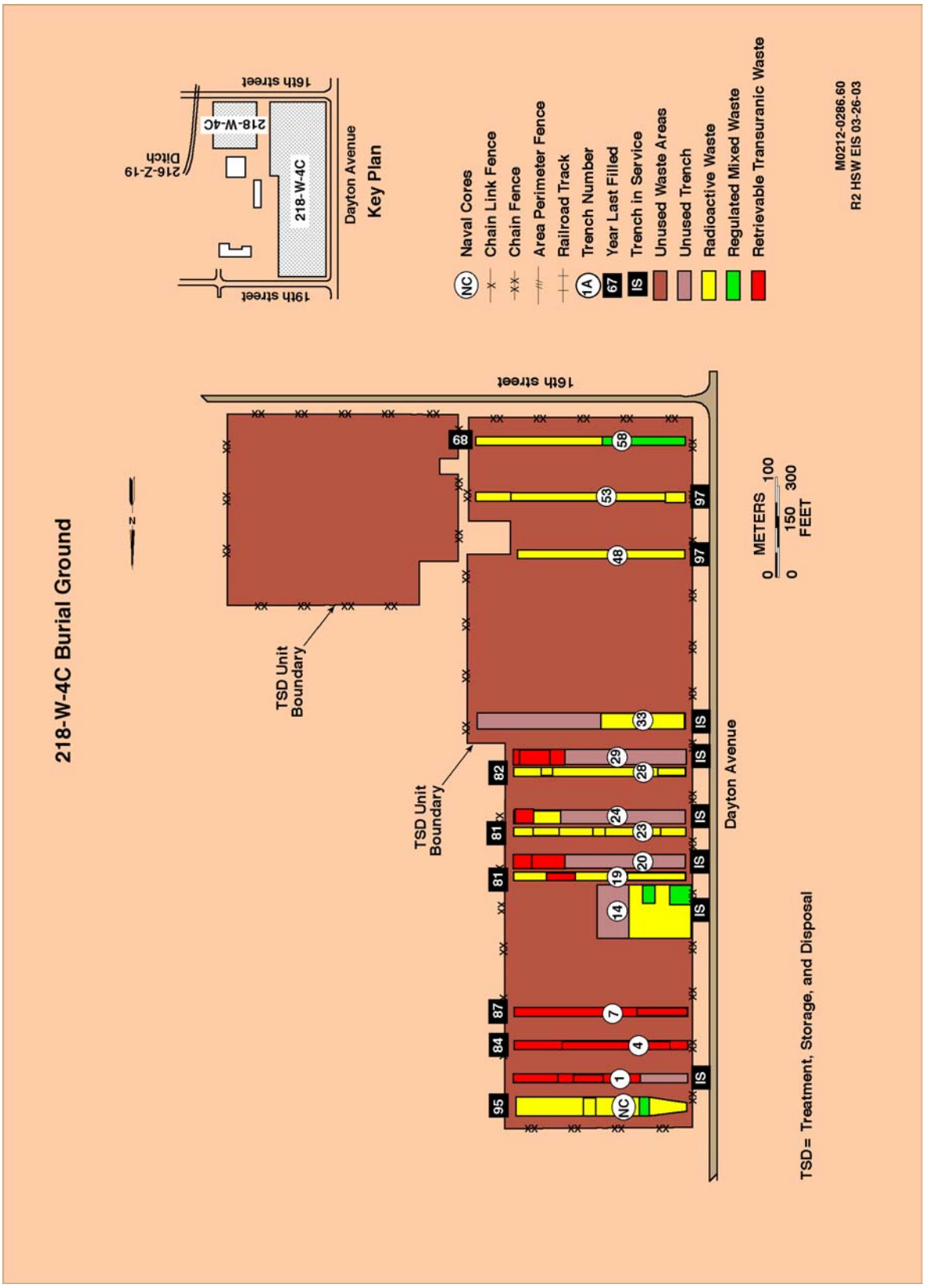

Figure D.6. 218-W-4C Burial Ground

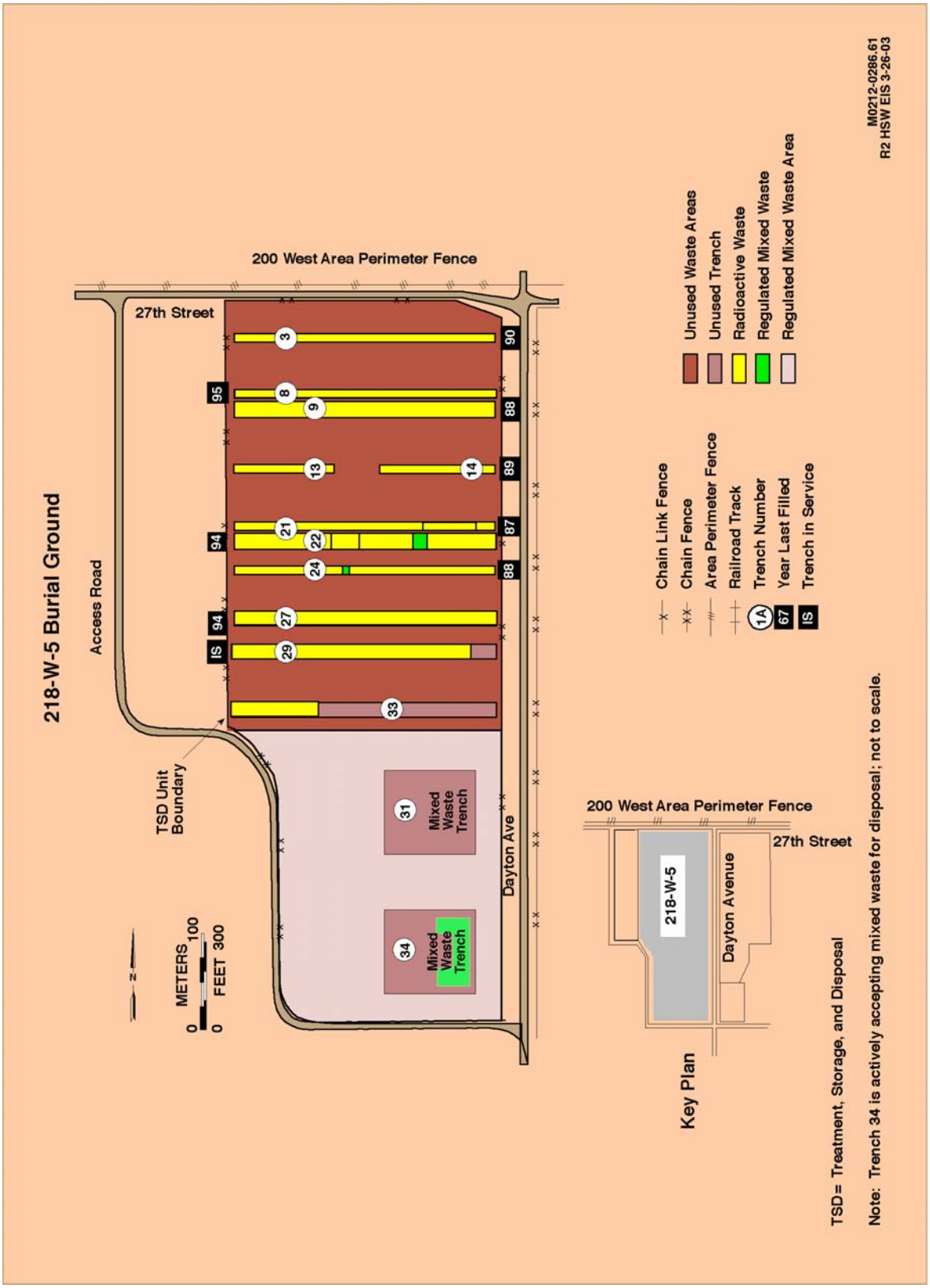

Figure D.7. 218-W-5 Burial Ground

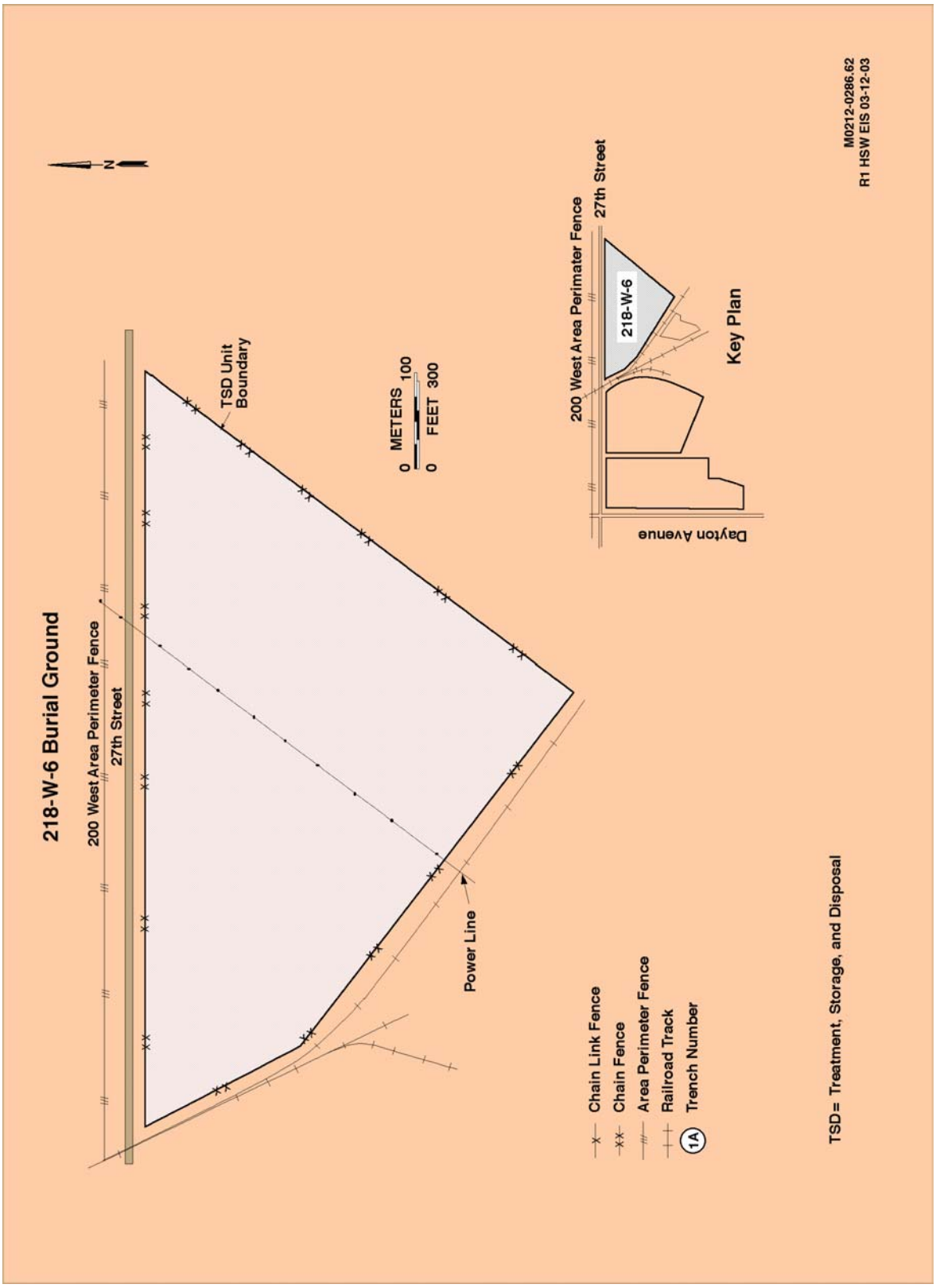

Figure D.8. 218-W-6 Burial Ground